METHODS, SYSTEMS AND COMPUTER PROGRAM PRODUCTS FOR BANDWIDTH ALLOCATION BASED ON THROUGHPUT GUARANTEES

5   ABSTRACT OF THE DISCLOSURE

Methods, systems and computer program products are provided for controlling access to a shared communication medium utilizing a revolving priority queue. The revolving priority queue (RPQ) is divided into at least a low priority tier having a

10   plurality of request queues and a high priority tier having a plurality of request queues. A request is directed into an initial queue in the high priority tier if throughput for an end user associated with the request fails to meet a guaranteed throughput. Furthermore, bandwidth may be allocated based on an order in which requests are read from the RPQ, where requests are read from the high priority tier

15   before requests are read from the low priority tier of queues. Additional system embodiments are provided as well as embodiments which may be used for requests or for packet-based bandwidth allocation. Embodiments of the present invention are particularly suitable for use in multiple access broadband systems such as cable television systems.